

2P. UTILITY OPERATIONS (INCLUDING INTAKE WATER TREATMENT AND STEAM AND POWER GENERATION)

TECHNICAL INFORMATION HELP LINE: (800) 357-7075



ARE UTILITY OPERATIONS (ONLY INCLUDE INTAKE WATER TREATMENT AND STEAM AND POWER GENERATION) PERFORMED AT THIS SITE?

G YES (CONTINUE)

G NO (SKIP TO SECTION 3)

THROUGHOUT THIS SECTION, YOU WILL BE REQUIRED TO PROVIDE INFORMATION FOR **ALL** OPERABLE UNITS AND WATER SYSTEMS RELATED TO UTILITY OPERATIONS WHICH WERE ON SITE DURING 1997, INCLUDING UNITS AND WATER SYSTEMS WHICH MAY HAVE BEEN IDLE FOR AN EXTENDED PERIOD OF TIME DUE TO CIRCUMSTANCES SUCH AS MARKET CONDITIONS, MAJOR REBUILDS, OR LABOR DISPUTES. IF AN OPERABLE UNIT OR WATER SYSTEM WAS NOT IN OPERATION DURING 1997, SUBSTITUTE THE MOST RECENT CALENDAR YEAR WHEN SUCH CIRCUMSTANCES DID NOT EXIST. NOTE THE YEAR OF OPERATION AND THE CIRCUMSTANCES IN THE COMMENTS AT THE END OF THIS SECTION, AND PROVIDE DATA FROM THAT CALENDAR YEAR.



HOW MANY **OPERABLE INTAKE WATER TREATMENT SYSTEMS** USED TO TREAT WATER PRIOR TO USE IN MANUFACTURING PROCESSES OR STEAM OR POWER GENERATION WERE ON SITE DURING 1997? _____

COMPLETE A COPY OF QUESTION 2P-1 FOR **EACH** OPERABLE INTAKE WATER TREATMENT SYSTEM. NUMBER EACH COPY OF QUESTION 2P-1 IN THE SPACE PROVIDED IN THE UPPER RIGHT CORNER. NOTE: QUESTION 2P-1 IS FIVE PAGES LONG.

IF YOUR SITE DOES NOT HAVE ANY INTAKE WATER TREATMENT SYSTEMS USED TO TREAT WATER PRIOR TO USE IN MANUFACTURING PROCESSES OR STEAM OR POWER GENERATION, **CHECK THE BOX TO THE RIGHT AND SKIP TO QUESTION 2P-2.**

G

- G CBI 2P-1.a.** What is the site designation for this intake water treatment system? _____
- G CBI b.** What was the first year of operation for this intake water treatment system? _____
- G CBI c.** Indicate the source of water treated by this intake water treatment system.
- G** City water (*specify city*): _____
- G** Well water
- G** Surface water (*specify location*): _____
- G** Storm water
- G** Other (*specify*): _____
- G CBI d.** Indicate the treatment method(s) and/or treatment unit(s) employed. Check (✓) **ALL** that apply.
- G** Biological control
- G** Cold lime water softening
- G** Demineralization
- G** Filtration
- G** Reverse osmosis
- G** Zeolite water softening
- G** Other (*specify*): _____
- G** Other (*specify*): _____
- G** Other (*specify*): _____

COMPLETE A COPY OF QUESTION 2P-1 FOR EACH OPERABLE INTAKE WATER TREATMENT SYSTEM.

- G CBI 2P-1.e. (cont.)** Attach a process flow diagram (PFD) that shows the intake water treatment system. You are **NOT** required to create a new PFD if an existing diagram will suffice. Number the diagram in the upper right corner, and include your site ID number (shown on the cover page of Part A). Specific instructions for including the PFD, along with an example diagram, are provided below. **Flow rates are NOT required on the diagrams.**

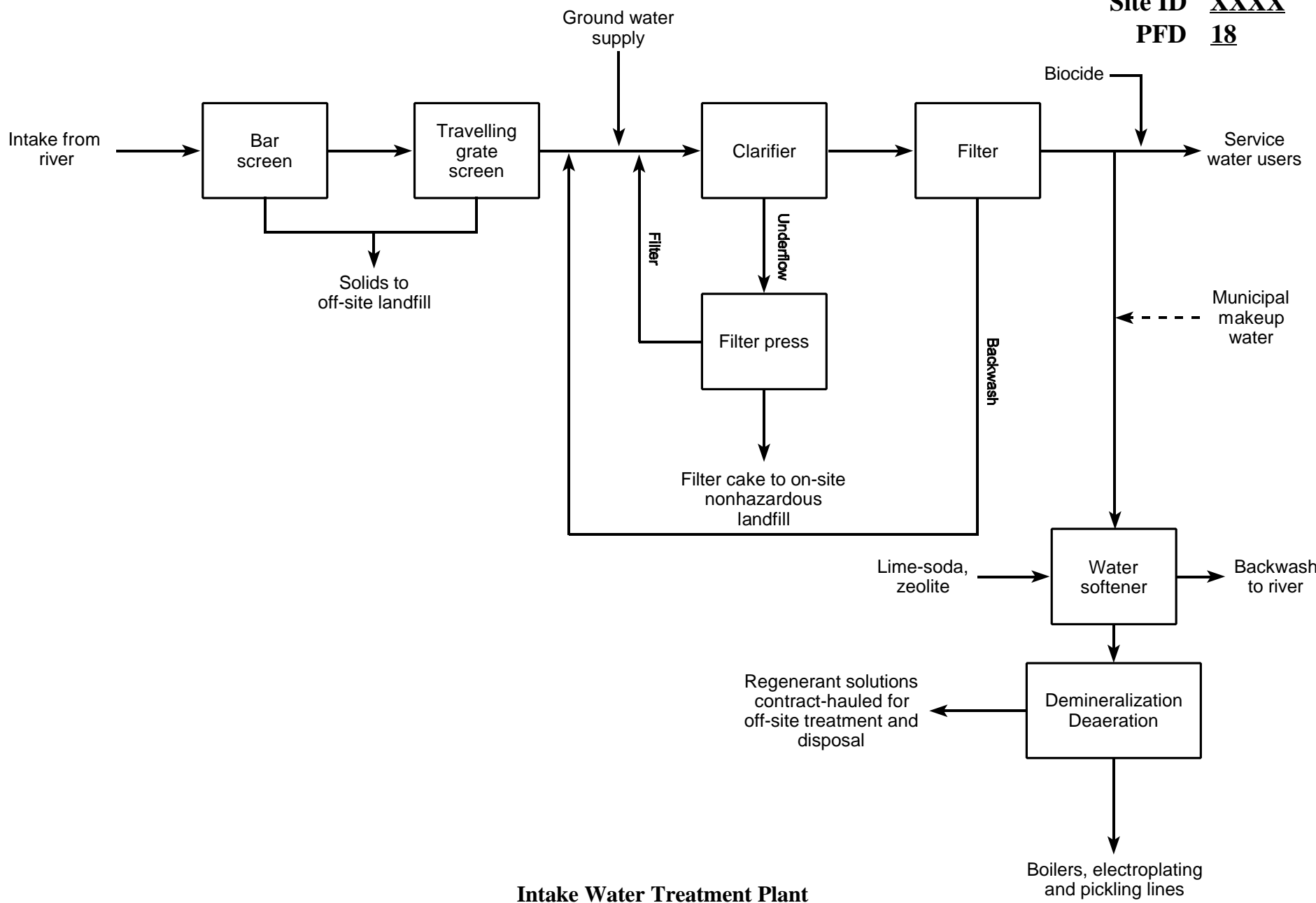
Provide the number assigned to the intake water treatment system PFD. **If the process is already shown on a PFD provided elsewhere in this survey, provide the PFD number and review the following list for completeness.** If you need assistance, call the Technical Information Help Line at (800) 357-7075.

Intake water treatment system PFD- _____

Process Flow Diagram Checklist

Be sure...	✓
All intake water treatment operations are included. Include those operations which do not generate process wastewater.	G
All air pollution control systems are included. Label each system as being either wet or dry. Water streams for all wet air pollution control systems must be shown, including all recycle streams and all treatment processes within recycle loops.	G
Any recycle or reuse of water is indicated clearly on the diagram.	G
Significant losses of water (e.g., evaporation) are shown.	G
All materials entering each operation and all products and wastes exiting each operation are identified.	G
All water streams are identified. When sources and destinations of water are not shown on the diagram (i.e., the stream is entering from or exiting to a location not shown on the diagram), describe the source or destination (e.g., "from river" or "to blast furnace wet air pollution control system") and add the PFD number, when appropriate, where the stream's previous or next location can be seen.	G
The PFD number and your site ID number are written on the diagram.	G
If you believe that the diagram should be treated as confidential, stamp it "Confidential" or write "Confidential" or "CBI" across the top. If any diagram is not marked "Confidential", it will be considered nonconfidential under 40 CFR Part 2, Subpart B.	G

Site ID XXXX
PFD 18



**Intake Water Treatment Plant
Example Process Flow Diagram**

 COMPLETE A COPY OF QUESTION 2P-1 FOR EACH OPERABLE INTAKE WATER TREATMENT SYSTEM.

- G CBI 2P-1.f. (cont.)** Indicate chemical additions to this water treatment system. Check (✓) **ALL** that apply.
- | | |
|---|--|
| G Acid | G Scale inhibitor |
| G Biocide | G Surfactant |
| G Caustic (sodium hydroxide) | G Zeolite |
| G Corrosion inhibitor | G Other (<i>specify</i>): _____ |
| G Lime | G Other (<i>specify</i>): _____ |
| G Polymer | G Other (<i>specify</i>): _____ |
| G Salt (<i>specify</i>): _____ | G None |
- G CBI g.** Provide the design flow of this water treatment system. _____ gpm
- G CBI h.** Provide the average rate (influent flow rate) at which water is added to the system for treatment and period of water addition.
- _____ gpm _____ hours per day _____ days per year
- OR:** _____ gallons per day _____ days per year
- G CBI i.** Provide the average discharge rate of treated water from the system and period of discharge.
- _____ gpm _____ hours per day _____ days per year
- OR:** _____ gallons per day _____ days per year
- G CBI j.** Indicate the manufacturing operations which receive treated water from this water treatment system. Check (✓) **ALL** that apply.
- G** Cokemaking
 - G** Sintering
 - G** Briquetting (and other agglomeration processes)
 - G** Blast furnace ironmaking
 - G** Direct-reduced ironmaking
 - G** Basic oxygen furnace steelmaking
 - G** Electric arc furnace steelmaking
 - G** Vacuum degassing
 - G** Ladle metallurgy (and other refining processes)
 - G** Casting
 - G** Hot forming
 - G** Acid pickling and descaling (including acid regeneration)
 - G** Cold forming
 - G** Surface cleaning and coating
 - G** Steam and/or power generation unit (boiler)
 - G** Other (*specify*): _____
- G CBI k.** Is any wastewater generated by this water treatment system?
- G** Yes
 - G** No (SKIP to Question 2P-2)

 COMPLETE A COPY OF QUESTION 2P-1 FOR EACH OPERABLE INTAKE WATER TREATMENT SYSTEM.

- G CBI 2P-1.l. (cont.)** Identify the source(s) of wastewater.
- G** Cold lime softening backwash
 - G** Filter backwash
 - G** Reverse osmosis reject water
 - G** Zeolite softener backwash
 - G** Other (*specify*): _____
 - G** Other (*specify*): _____
- G CBI m.** Provide the combined average discharge rate of the source(s) of wastewater from the system and period of discharge.
- _____ gpm _____ hours per day _____ days per year
- OR:** _____ gallons per day _____ days per year
- G CBI n.** Indicate the destination of wastewater discharge. Check (✓) **ALL** that apply.
- G** Discharge to treatment (*specify treatment system*): _____
 - G** Discharge without treatment by pipeline, sewer, or other conveyance to surface water (*specify outfall number*): _____
 - G** Discharge without treatment by pipeline, sewer, or other conveyance to POTW (*specify designation for permit monitoring location*): _____
 - G** Discharge without treatment by pipeline, sewer, or other conveyance to PrOTW (*specify designation for permit monitoring location if applicable*): _____
 - G** Zero discharge or alternative disposal methods:
 - G** Deep-well injection
 - G** Evaporation (*specify method*): _____
 - G** Percolation ponds
 - G** Spray irrigation
 - G** Contract hauled
(*specify disposal rate, including transportation*): \$ _____ per gallon
(*specify destination/disposal method*): _____
 - G** Incineration
 - G** Other (*specify*): _____

G CBI 2P-2.a. How many operable steam generation or power generation plants (including stationary, backup, and diesel power generators) were on site during **1997**? _____

G CBI b. Indicate the manufacturing operation(s) or other uses for which steam or power is generated. Check (✓) **ALL** that apply.

G Cokemaking

G Sintering

G Briquetting (and other agglomeration processes)

G Blast furnace ironmaking

G Direct-reduced ironmaking

G Basic oxygen furnace steelmaking

G Electric arc furnace steelmaking

G Vacuum degassing

G Ladle metallurgy (and other refining processes)

G Casting

G Hot forming

G Acid pickling and descaling (including acid regeneration)

G Cold forming

G Surface cleaning and coating

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G CBI c. Indicate fuel(s) which are consumed in the on-site steam or power generation plant(s). Check (✓) **ALL** that apply.

G Coke oven gas

G Blast furnace gas

G Natural gas

G Coal

G Oil

G Used oil

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

G CBI

2P-2.d.
(cont.)

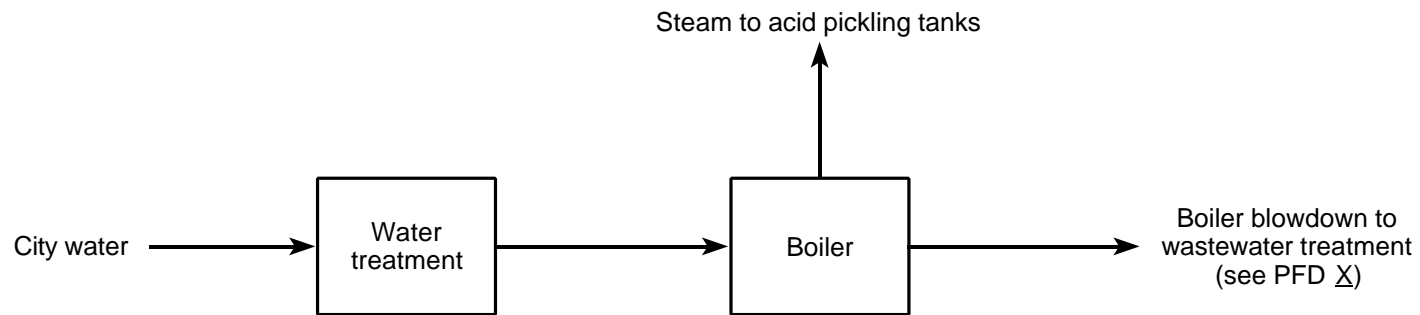
Attach a process flow diagram (PFD) that shows the steam or power generation plant(s) and the water use associated with the plant(s). You are **NOT** required to create a new PFD if an existing diagram will suffice. Number the diagram in the upper right corner, and include your site ID number (as shown on the cover page of Part A). Specific instructions for including the PFD, along with an example diagram, are provided below. **Flow rates are NOT required on the diagrams.**

Provide the number assigned to the steam or power generation plant PFD. **If the process is already shown on a PFD provided elsewhere in this survey, provide the PFD number and review the following list for completeness.** If you need assistance, call the Technical Information Help Line at (800) 357-7075.

Steam or power generation PFD-_____

Process Flow Diagram Checklist

Be sure...	✓
All steam or power generation operations are included. Include those operations which do not generate process wastewater.	G
All air pollution control systems are included. Label each system as being either wet or dry. Water streams for all wet air pollution control systems must be shown, including all recycle streams and all treatment processes within recycle loops.	G
Any recycle or reuse of water is indicated clearly on the diagram.	G
Significant losses of water (e.g., evaporation) are shown.	G
All materials entering each operation and all products and wastes exiting each operation are identified.	G
All water streams are identified. When sources and destinations of process wastewater are not shown on the diagram (i.e., the stream is entering from or exiting to a location not shown on the diagram), describe the source or destination (e.g., "from river" or "to wastewater treatment") and add the PFD number, when appropriate, where the stream's previous or next location can be seen.	G
The PFD number and your site ID number are written on the diagram.	G
If you believe that the diagram should be treated as confidential, stamp it "Confidential" or write "Confidential" or "CBI" across the top. If any diagram is not marked "Confidential", it will be considered nonconfidential under 40 CFR Part 2, Subpart B.	G



**Steam Generation Plant
Example Process Flow Diagram**

G CBI 2P-2.e.
(cont.)

For each operable unit in the steam or power generation plant(s), provide the capacity of each unit (e.g., lbs/hr and psig) and the capacity utilization for **1997** (the percentage of steam or power actually generated as compared to the capacity).

[illegible]



HOW MANY **OPERABLE WET AIR POLLUTION CONTROL (WAPC) SYSTEMS** WERE ON SITE AT THE INTAKE WATER TREATMENT OR STEAM OR POWER GENERATION PLANT(S) DURING **1997**? _____

COMPLETE A COPY OF QUESTION 2P-3 FOR **EACH** OPERABLE WAPC SYSTEM. NUMBER EACH COPY OF QUESTION 2P-3 IN THE SPACE PROVIDED IN THE UPPER RIGHT CORNER. NOTE: QUESTION 2P-3 IS THREE PAGES LONG.

IF YOUR SITE DOES NOT HAVE WET AIR POLLUTION CONTROL ASSOCIATED WITH ANY INTAKE WATER TREATMENT OR STEAM OR POWER GENERATION PLANTS, **CHECK THE BOX TO THE RIGHT AND SKIP TO QUESTION 2P-4.**

G

- G CBI 2P-3.a.** Provide the designation(s) of the intake water treatment or steam or power generation plant(s) and all other operations associated with this WAPC system. Designation(s) should correspond with response(s) to Questions 2P-1.a. If information for this WAPC system is already provided elsewhere in this survey, answer Question 2P-3.a., check the box to the right, and SKIP to Question 2P-4. **G**

- G CBI b.** Indicate the devices in this WAPC system. Check (✓) **ALL** that apply.

G Venturi scrubber

G Demister

G Spray chamber

G Packed tower

G Baghouse

G Other (specify): _____

G Separator

G Other (specify): _____

- G CBI c.** Provide the gas or air flow through the system in dry standard cubic feet per minute (dscfm).

_____ dscfm

- G CBI d.** Is the water recirculated or applied once-through?

G Recirculated (continue)

G Once-through (SKIP to Question 2P-3.k.)

- G CBI e.** Is any treatment and/or conditioning (e.g., chemical additions) performed in the recirculating loop?

G Yes (continue)

G No (SKIP to Question 2P-3.i.)

- G CBI f.** Does the treatment in the recirculating loop also treat wastewater from other processes?

G No - Dedicated treatment

G Yes - Treatment shared with other processes

Specify the processes: _____

COMPLETE A COPY OF QUESTION 2P-3 FOR EACH OPERABLE WAPC SYSTEM.

- G CBI 2P-3.g. (cont.)** Check (✓) **ALL** treatment units and/or treatment processes which are included in the recirculating loop.
- | | |
|---|---|
| G Clarifiers | G Oil skimmers |
| G Classifiers | G Scale pits |
| G Cooling towers | G Sludge dewatering units (e.g., vacuum filter, pressure filtration, etc.) |
| G Earthen Lagoons | G Water filters (e.g., sand, multimedia, etc.) |
| G Lined (<i>specify liner type</i>): | G Water softeners |
| G Clay | G Other (<i>specify</i>): _____ |
| G Synthetic | G Other (<i>specify</i>): _____ |
| G Other (<i>specify</i>): _____ | G None |
| G Unlined | |
- G CBI h.** Indicate chemical additions to the water recirculation system. Check (✓) **ALL** that apply.
- | | |
|-------------------------------------|--|
| G Acid | G Scale inhibitor |
| G Biocides | G Surfactant |
| G Caustic (sodium hydroxide) | G Other (<i>specify</i>): _____ |
| G Corrosion inhibitor | G Other (<i>specify</i>): _____ |
| G Lime | G Other (<i>specify</i>): _____ |
| G Polymer | G None |
- G CBI i.** Provide the design flow of water through the recirculating loop. _____ gpm
- G CBI j.** Provide the average recirculation rate of water through the WAPC system and period of operation.
- _____ gpm _____ hours per day _____ days per year
- G CBI k.** Provide the rate at which new water is added to the system (for once-through systems, provide the influent average flow rate; for recirculating systems, provide the makeup flow rate).
- _____ gallons per day _____ days per year
- G CBI l.** Indicate **ALL** sources for water addition. Provide the percentage of water contributed by each source. The percentages should add to 100 percent.
- | | |
|--|---------|
| G Plant service water (city, well, or surface water which has not been used elsewhere on site) | _____ % |
| G Noncontact cooling water (<i>specify manufacturing process(es)</i>): | _____ % |
| _____ | |
| G Treated process wastewater (<i>specify manufacturing process(es)</i>): | _____ % |
| _____ | |
| G Untreated process wastewater (<i>specify manufacturing process(es)</i>): | _____ % |
| _____ | |
| G Treated storm water (<i>specify manufacturing process(es) or other collection area(s)</i>): | _____ % |
| _____ | |
| G Untreated storm water (<i>specify manufacturing process(es) or other collection area(s)</i>): | _____ % |
| _____ | |
| G Other (<i>specify</i>): | _____ % |
| | |
| Total: | 100 % |

COMPLETE A COPY OF QUESTION 2P-3 FOR EACH OPERABLE WAPC SYSTEM.

- G CBI 2P-3.m. (cont.)** Provide the average discharge rate from the system and period of discharge (for recirculating systems, provide the blowdown rate).
- _____ gpm _____ hours per day _____ days per year
- OR:** _____ gallons per day _____ days per year
- G CBI n.** Indicate the destination of wastewater discharge or blowdown. Check (✓) **ALL** that apply.
- G** Discharge to treatment (*specify treatment system*): _____
- G** Discharge without treatment by pipeline, sewer, or other conveyance to surface water (*specify outfall number*): _____
- G** Discharge without treatment by pipeline, sewer, or other conveyance to POTW (*specify designation for permit monitoring location*): _____
- G** Discharge without treatment by pipeline, sewer, or other conveyance to PrOTW (*specify designation for permit monitoring location if applicable*): _____
- G** Zero discharge or alternative disposal methods:
- G** Deep-well injection
- G** Evaporation (*specify method*): _____
- G** Percolation pond
- G** Spray irrigation
- G** Contract hauled
(*specify disposal rate, including transportation*): \$ _____ per gallon
(*specify destination/disposal method*): _____
- G** Incineration
- G** Other (*specify*): _____

G CBI 2P-4.a. Are any dry air pollution control (DAPC) systems associated with intake water treatment or steam or power generation plants?

G Yes (continue)

G No (SKIP to Question 2P-5)

G CBI b. Provide the intake water treatment or steam or power generation plant designations associated with any DAPC system, one per line. Designation(s) should correspond with response(s) to Question 2P-1.a. For each process listed, indicate the type of DAPC system.

Intake Water Treatment or Steam or Power Generation Plant Designations	Type of DAPC System
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):
	G Fabric filter (i.e., baghouse) G Electrostatic precipitator G Other (<i>specify</i>):



EXCLUDING WAPC SYSTEMS AND STORM WATER, HOW MANY OTHER WASTEWATER SOURCES (E.G., BACKWASHES) FROM INTAKE WATER TREATMENT OR STEAM AND POWER GENERATING OPERATIONS ARE PRESENT? _____

COMPLETE A COPY OF QUESTION 2P-5 FOR **EACH** INTAKE WATER TREATMENT AND STEAM AND POWER GENERATION WASTEWATER SOURCE. NUMBER EACH COPY OF QUESTION 2P-5 IN THE SPACE PROVIDED IN THE UPPER RIGHT CORNER. NOTE: QUESTION 2P-5 IS TWO PAGES LONG.

IF YOUR SITE HAS NO INTAKE WATER TREATMENT OR STEAM OR POWER GENERATION SOURCES WHICH CONTRIBUTE WASTEWATER NOT ASSOCIATED WITH A WAPC SYSTEM OR STORM WATER, **CHECK THE BOX TO THE RIGHT AND SKIP TO QUESTION 2P-6.**

G

2P-5. Provide information for other on-site wastewater generating sources associated with intake water treatment or steam and power generation plants.

G CBI a. Provide the designation(s) of the plant associated with this wastewater generating source. Designation(s) should correspond with response(s) to Question 2P-1.a.

G CBI b. Indicate the source of wastewater not associated with wet air pollution control or storm water. If there is more than one source at this site, complete a copy of this question for **EACH** steam or power generation source.

G Filter backwash

G Boiler blowdown

G Equipment cleaning and washdown water

G Other (*specify*): _____

G CBI c. Provide a list of chemicals or pollutants known or believed to be present in this source of wastewater. If a list is readily available, attach it to the survey with this question number and your site ID written on the upper right corner. If a chemical or pollutant originates from a commercial cleaning solution (e.g., solutions used to clean and wash equipment), provide the vendor name of the cleaning product and the product code, if known.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

G CBI d. Provide the wastewater flow rate and period of discharge associated with the source checked above.

_____ gpm _____ hours per day _____ days per year

OR: _____ gallons per day _____ days per year

COMPLETE A COPY OF QUESTION 2P-5 FOR EACH INTAKE WATER TREATMENT OR STEAM AND POWER GENERATING
PROCESS WASTEWATER SOURCE NOT ASSOCIATED WITH A WAPC SYSTEM OR STORM WATER.

G CBI 2P-5.e.
(cont.)

Indicate the destination of this wastewater stream. Check (✓) ALL that apply.

- G Discharge to treatment (*specify treatment system*): _____
- G Discharge without treatment by pipeline, sewer, or other conveyance to surface water (*specify outfall number*): _____
- G Discharge without treatment by pipeline, sewer, or other conveyance to POTW (*specify designation for permit monitoring location*): _____
- G Discharge without treatment by pipeline, sewer, or other conveyance to PrOTW (*specify designation for permit monitoring location if applicable*): _____
- G Zero discharge or alternative disposal methods:
 - G Deep-well injection
 - G Evaporation (*specify method*): _____
 - G Percolation pond
 - G Spray irrigation
 - G Contract haul
(*specify disposal rate, including transportation*): \$ _____ per gallon
(*specify destination/disposal method*): _____
 - G Incineration
 - G Other (*specify*): _____

G CBI 2P-6. Provide information on any major process modifications and/or shut downs which have occurred at the utility operations (intake water treatment systems, steam generation plants, and power generation plants) since 1993. Provide the utility operations designations in the description. Designation(s) should correspond with response(s) to Question 2P-1.a.

Shut Down or Modification?	Date	Description

G CBI 2P-7. Provide information on any publicly announced process modifications and/or shut downs planned to occur during the next five years (1998 to 2002) at the utility operations. Provide the utility operations designations in the description. Designation(s) should correspond with response(s) to Question 2P-1.a.

Shut Down or Modification?	Anticipated Date	Description

G CBI 2P-8. Indicate **ALL** pollution prevention (waste reduction) or management practices implemented by your site for the utility operations and describe the practice as it is implemented. Describe all processes where by-products and wastes are recovered for reuse or sold as a raw material feedstock. Discuss the percent recovered. Provide the utility operations designations in the description. Designation(s) should correspond with response(s) to Question 2P-1.a.

Management Practices	Description of Practice
G Management of spillage and losses from raw material unloading operations associated with utility operations	
G Collection and treatment and/or disposal of storm water from any areas associated with utility operations (specify manufacturing processes or collection areas in description)	
G Collection and treatment and/or disposal of contaminated ground water associated with utility operations	
G Other (<i>specify</i>):	
G Other (<i>specify</i>):	
G Other (<i>specify</i>):	
G Other (<i>specify</i>):	
G Other (<i>specify</i>):	
G Other (<i>specify</i>):	
G Other (<i>specify</i>):	

COMMENTS FOR SECTION 2P: UTILITY OPERATIONS (INCLUDING INTAKE WATER TREATMENT AND STEAM AND POWER GENERATION)

Cross reference your comments by question number and indicate the confidential status of your comment by checking (✓) the box in the column titled "CBI" (Confidential Business Information). If you need additional space, photocopy this page before writing on it and number each copy in the space provided in the upper right corner.

Question Number	CBI	Comment
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SECTION 3

IN-PROCESS AND END-OF-PIPE WASTEWATER TREATMENT AND POLLUTION PREVENTION INFORMATION

GENERAL INSTRUCTIONS

This section of the survey has been designed to collect information specific to the in-process and end-of-pipe treatment of process wastewaters at your site. You are required to complete the following subsections:

- 3A In-Process and End-of-Pipe Wastewater Treatment Systems
- 3B Plant-Wide Pollution Prevention Practices

Carefully read the instructions at the beginning of each subsection. **SECTION 3A may need to be photocopied before responding if your site has multiple wastewater treatment systems. DO NOT complete a copy of Section 3A for wastewater treatment systems dedicated to sanitary wastewaters. For copied sections, number the copies using the space provided at the top of each page. Some QUESTIONS within each copied section may need to be copied before responding. For copied pages, number the copies using the space provided in the upper right corner. SECTION 3B may need to be photocopied if your site has many plant-wide pollution prevention practices.**

In order to understand the overall process, EPA is requiring in Question 3A-3 that you attach to the survey a wastewater treatment process flow diagram (PFD) for each wastewater treatment system used to treat process wastewater on site, including treatment within recirculation loops, treatment of blowdowns, and treatment of once-through process wastewater. Because you are asked to attach several PFDs to the survey, number each PFD in the upper right corner, starting with "PFD-1", and numbering each sequentially. If you have already started numbering PFDs, use the next number in the sequence. Make sure your site ID number (shown on the cover page of Part A) is on each diagram.

Refer to the Definitions Section for terms which are used in this survey.

If a particular part of the required information is not applicable to a specific question, indicate by "NA" rather than leaving the answer blank. Enter zero where appropriate. Do not leave an entry blank if the answer is zero.

You are required to provide best engineering estimates when data are not readily available. If you provide an estimate, note the methods that were used to make the estimates on the Comments page at the end of Section 3A.

If you have any comments on a question or you feel an answer needs clarification, use the Comments page located at the end of Section 3A. Be sure to cross-reference your comments by question number.

If you have any questions regarding the completion of this section of the survey, contact the Technical Information Help Line at (800) 357-7075 for assistance, or email your questions to steel_helpline@erg.com.

Indicate information which should be treated as confidential by checking the Confidential Business Information (CBI) box next to each question number for which responses contain CBI. Any response where "CBI" is not checked will be considered nonconfidential. Refer to the instructions given in the PROVISIONS REGARDING DATA CONFIDENTIALITY section on page ii for additional information regarding EPA's confidentiality procedures set forth in 40 CFR Part 2, Subpart B.

SECTION 3A. IN-PROCESS AND END-OF-PIPE WASTEWATER TREATMENT SYSTEMS

TECHNICAL INFORMATION HELP LINE: (800) 357-7075



IS ANY WASTEWATER TREATMENT PERFORMED AT THIS SITE?

G YES (CONTINUE)

G NO (SKIP TO SECTION 3B)

THROUGHOUT THIS SECTION, YOU WILL BE REQUIRED TO PROVIDE INFORMATION FOR **ALL** OPERABLE WATER SYSTEMS RELATED TO WASTEWATER TREATMENT WHICH WERE ON SITE DURING 1997, INCLUDING WATER SYSTEMS WHICH MAY HAVE BEEN IDLE FOR AN EXTENDED PERIOD OF TIME DUE TO CIRCUMSTANCES SUCH AS MARKET CONDITIONS, MAJOR REBUILDS, OR LABOR DISPUTES. IF A WATER SYSTEM WAS NOT IN OPERATION DURING 1997, SUBSTITUTE THE MOST RECENT CALENDAR YEAR WHEN SUCH CIRCUMSTANCES DID NOT EXIST. NOTE THE YEAR OF OPERATION AND THE CIRCUMSTANCES IN THE COMMENTS AT THE END OF THIS SECTION, AND PROVIDE DATA FROM THAT CALENDAR YEAR.



FOR PURPOSES OF THIS SURVEY, EPA IS REQUIRING INFORMATION ABOUT ALL WASTEWATER TREATMENT WHICH OCCURS AT YOUR SITE EXCEPT TREATMENT OF SANITARY WASTEWATERS. IN ORDER TO UNDERSTAND THE SPECIFICS OF YOUR TREATMENT SYSTEM(S), EPA IS REQUIRING THAT YOU COMPLETE A COPY OF SECTION 3A FOR **EACH** IN-PROCESS WASTEWATER TREATMENT SYSTEM, **EACH** WASTEWATER PRETREATMENT SYSTEM, AND **EACH** END-OF-PIPE (FINAL) WASTEWATER TREATMENT SYSTEM. **DO NOT COMPLETE A COPY OF SECTION 3 FOR COKE PLANT WASTEWATER TREATMENT SYSTEMS BECAUSE THEY WERE INCLUDED IN SECTION 2A - COKEMAKING.** FOR THE PURPOSE OF THIS SURVEY, EPA IS USING THE FOLLOWING DEFINITIONS FOR WASTEWATER TREATMENT:

IN-PROCESS WASTEWATER TREATMENT SYSTEM: A PROCESS WASTEWATER OR CHEMICAL SOLUTION TREATMENT SYSTEM TYPICALLY LOCATED AT OR NEAR A MANUFACTURING PROCESS FOR THE PURPOSE OF RETURNING WATER TO THE PROCESS (E.G., BLAST FURNACE TREATMENT AND RECYCLE SYSTEM). AN IN-PROCESS WASTEWATER TREATMENT SYSTEM TYPICALLY HAS A BLOWDOWN WHICH MAY OR MAY NOT RECEIVE FURTHER TREATMENT.

WASTEWATER PRETREATMENT SYSTEM: A SYSTEM FOR SEGREGATED WASTEWATERS WITH SPECIFIC POLLUTANT CHARACTERISTICS (E.G., HEXAVALENT CHROMIUM, HIGH OIL CONTENT). A WASTEWATER PRETREATMENT SYSTEM PRETREATS SEGREGATED WASTEWATERS FOR THOSE SPECIFIC POLLUTANT CHARACTERISTICS BEFORE DISCHARGING TO ANOTHER FINAL (TYPICALLY END-OF-PIPE) WASTEWATER TREATMENT SYSTEM.

END-OF-PIPE (FINAL) WASTEWATER TREATMENT SYSTEM: A SYSTEM WHICH RECEIVES AND TREATS WASTEWATERS FROM ANY COMBINATION OF THE FOLLOWING: PROCESS DISCHARGES, IN-PROCESS WASTEWATER TREATMENT SYSTEM DISCHARGES, STORM WATERS, OR PRETREATMENT SYSTEM DISCHARGES.

HOW MANY **OPERABLE WASTEWATER TREATMENT SYSTEMS** (AS DEFINED ABOVE) WERE ON SITE DURING 1997, NOT INCLUDING ANY COKE PLANT WASTEWATER TREATMENT SYSTEMS?

- _____ IN-PROCESS WASTEWATER TREATMENT SYSTEM
- _____ WASTEWATER PRETREATMENT SYSTEM
- _____ END-OF-PIPE (FINAL) WASTEWATER TREATMENT SYSTEM

COMPLETE A COPY OF SECTION 3A FOR **EACH** TREATMENT SYSTEM. WHILE IN-PROCESS TREATMENT WAS IDENTIFIED THROUGHOUT SECTION 2, DETAILED INFORMATION WAS NOT COLLECTED. SECTION 3A SHOULD BE COMPLETED FOR EACH OF THESE SYSTEMS. NUMBER EACH COPY OF SECTION 3A IN THE SPACE PROVIDED AT THE TOP OF EACH PAGE.

- G CBI 3A-1.** What is the site designation for this treatment system (e.g., No. 2 blast furnace gas cleaning and cooling system)? _____
- G CBI 3A-2.** Indicate the type of this wastewater treatment system, using the previous definitions.
- G** In-Process Wastewater Treatment System, including recycle systems (*specify the names of the manufacturing process and the in-process treatment system as already provided in Section 2*):

 - G** Wastewater Pretreatment System
 - G** End-of-Pipe (Final) Wastewater Treatment System

G CBI 3A-3.

Attach a process flow diagram (PFD) that shows this wastewater treatment system and the water flow through this treatment system. You are **NOT** required to create a new PFD if an existing diagram will suffice. Number the diagram in the upper right corner, and include your site ID number (as shown on the cover page of Part A). Specific instructions for the inclusion of the PFD, along with example diagrams, are provided below.

For each unit shown on the diagram, identify the unit using the codes from the list of Wastewater Treatment Unit Codes on the following page. Use a numbering scheme for all units shown on the diagram so each unit has a unique number. For example, if a diagram shows one cooling tower and two primary clarifiers, identify these units as: CT-1, C1-1, and C1-2. See the following example figures for further clarification. In Question 3A-5, you are asked to provide design parameters for certain wastewater treatment units. For that question, you will need to refer to the unit code list to identify which parameters need to be provided. **Flow rates are NOT required on the diagram.**

Provide the PFD number assigned to this wastewater treatment system PFD. **If the wastewater treatment system is already shown on a PFD provided elsewhere in this survey, provide the PFD number and review the following list for completeness.** Because in-process wastewater treatment systems, pretreatment systems, and end-of-pipe wastewater treatment systems are often linked, EPA expects that these systems may be shown together on existing figures and they may be provided in that form. If you need assistance, call the Technical Information Help Line at (800) 357-7075.

Wastewater treatment system PFD- _____

Process Flow Diagram Checklist

Be sure...

All sources entering the treatment system are identified and labeled. Sources include but are not limited to: process wastewater (specify process), storm water, effluent from other treatment systems (specify PFD number for other treatment systems, including Section 2 PFDs), ground water, noncontact cooling water, utility wastewater, and landfill leachate.

All treated wastewater destinations are identified and labeled. Destinations include surface waters (specify name), POTWs, reuse in other manufacturing processes (specify processes), other wastewater treatment systems (specify systems), and on-site and off-site disposal locations.

All appropriate wastewater treatment unit codes (listed on the following pages) have been added to the diagram.

Return streams for all filtrates, supernatants, or other recycle streams are labeled.

Significant losses of water (e.g., evaporation) are shown.

Sludges, oils, and other wastes leaving the system and their destinations are identified and labeled.

Permit monitoring locations and outfall numbers are identified and labeled.

The PFD number and your site ID number are written on the diagram.

If you believe that the diagram should be treated as confidential, stamp it "Confidential" or write "Confidential" or "CBI" across the top. If any diagram is not marked "Confidential", it will be considered nonconfidential under 40 CFR Part 2, Subpart B.

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WASTEWATER TREATMENT UNIT CODES	
Code	Design Parameters of Interest
AC = Activated carbon system	carbon bed dimensions, empty bed RT, gpm per cubic foot carbon
AE = Aeration tank or basin (not used for biological treatment)	air flow rate, total aeration hp and type, RT, dimensions, volume, construction material
BT = Biological treatment tank - (<i>specify type with design parameter</i>)	dimensions, food to microorganism (F/M) ratio, mean cell RT, reactor type
CM = Chemical mix tank	tank dimensions, mixer size (hp) and type
C1 = Clarifier - primary	RT, surface-loading rate ("overflow rate"), dimensions, tank shape
C2 = Clarifier - secondary	
CL = Classifier	None
CP = Cooling pond	RT, dimensions
CT = Cooling tower	wet bulb temperature, approach temperature
CD = Cyanide destruction system	None
CY = Cyanide precipitation system	None
DF = Dissolved air flotation tank or basin	RT, dimensions
EL = Earthen lagoon - lined (not used for biological treatment)	RT, dimensions, liner type and depth
EU = Earthen lagoon - unlined (not used for biological treatment)	RT, dimensions
EQ = Equalization tank or basin	RT, dimensions, volume, mixing system, construction material, aerated or not, total aeration hp and type, or cfm of air blowers
EV = Evaporator	operating temperature, dimensions, rate of evaporation
FM = Filter - multimedia	gpm per square foot, bed dimensions and type, number of units, media (if multimedia), pressure or gravity
FS = Filter - sand	
FO = Filter - other (<i>specify type with design parameters</i>)	
FC = Flocculation/coagulation tank	RT, dimensions
HE = Heat exchanger, noncontact	None
HC = Hexavalent chromium reduction tank	RT, dimensions
IN = Incinerator or combustor	operating temperature

RT = residence time in hours

dimensions = provide depth and diameter (circular) or length and width (rectangular)

hp = horsepower

gpm = gallons per minute

cfm = cubic feet per minute

WASTEWATER TREATMENT UNIT CODES	
Code	Design Parameters of Interest
IP = Inclined plate separator	RT, dimensions
IE = Ion exchange system	resin life and type, wastewater application rate, dimensions
NE = Neutralization or pH adjustment tank	RT, dimensions
OS = Oil skimmer	RT
SA = Oil/water separator - American Petroleum Institute (API)	
SO = Oil/water separator - other (<i>specify type with design parameter</i>)	
RP = Retention pond (not used for biological treatment)	RT, dimensions
RO = Reverse osmosis system	membrane life, operating pressure, membrane dimensions and pore size
PS = Scale pit - with oil skimming	RT, dimensions
PN = Scale pit - without oil skimming	
BS = Sedimentation basin - with pipe/tube settlers	RT, dimensions
BN = Sedimentation basin - without pipe/tube settlers	
SC = Sludge dewatering unit - centrifuge	percent solids in feed and cake, gpm filtrate flow, sludge mass generated on wet basis (lbs/day or tons/day)
SF = Sludge dewatering unit - filter press	
SG = Sludge dewatering unit - gravity thickener	
SB = Sludge dewatering unit - sludge bed	
SD = Sludge dewatering unit - sludge dryer	
SV = Sludge dewatering unit - vacuum drum filter	
SO = Sludge dewatering unit - other (<i>specify type with design parameter</i>)	
SP = Spray ponds	volume, surface area
OO = Other (<i>specify type with design parameter</i>)	RT, dimensions

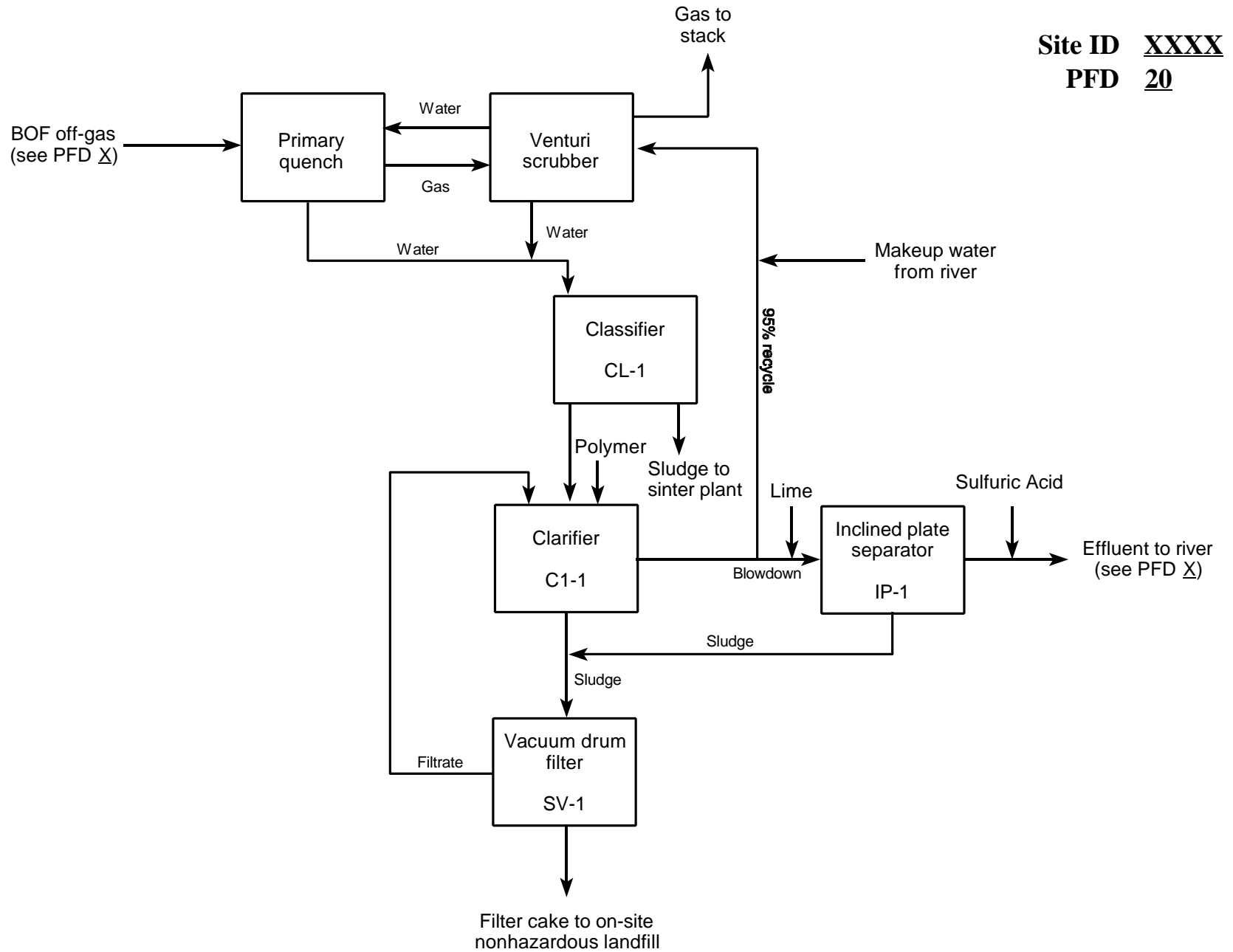
RT = residence time in hours

dimensions = provide depth and diameter (circular) or length and width (rectangular)

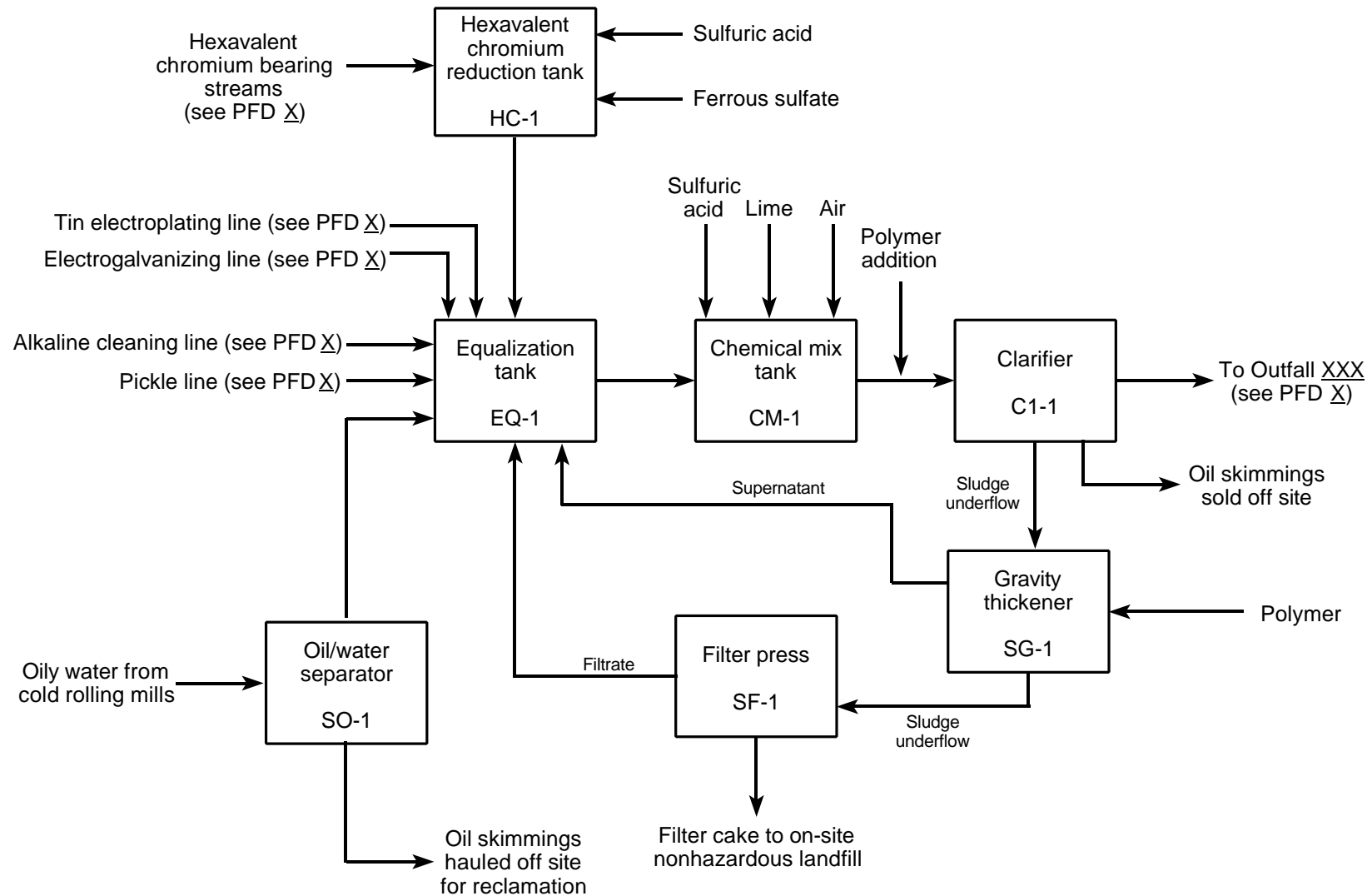
hp = horsepower

gpm = gallons per minute

cfm = cubic feet per minute



**Basic Oxygen Furnace In-Process Wastewater Treatment System
Example Process Flow Diagram**



**Oil Wastewater Pretreatment, Chromium Pretreatment,
and Metals End-of-Pipe Treatment
Example Process Flow Diagram**

G CBI 3A-4.

For all sources to this treatment system, provide the following information:

- The sources of wastewater (e.g., manufacturing process wastewater, manufacturing process noncontact cooling water, utility wastewater, storm water, ground water, landfill leachate, or the effluent from another treatment system). For noncontact cooling water, storm water, and ground water sources, specify the associated manufacturing areas of the mill.
- The estimated average flow rate in gallons per minute (gpm), hours per day (hpd), and days per year (dpy) **OR** if batch, the estimated average flow rate in gallons per day (gpd) and days per year (dpy). You are required to provide best engineering estimates when actual or measured flow data are not available.
- The first treatment unit in this wastewater treatment system that the wastewater source enters. Use the unit codes that were assigned to the units on the process flow diagram (Question 3A-3) and used to provide information in Question 3A-5.

If you need additional space, photocopy this page before writing on it and number each copy of Question 3A-4 in the space provided in the upper right corner. Note: Question 3A-4 is one page long.

Source of Wastewater	Flow Rate			Receiving Treatment Unit Code
Example blast furnace treatment and recycle system blowdown	<u>63</u> gpm	<u>24</u> hpd	<u>365</u> dpy	C1-1
	OR: _____ gpd	_____ dpy		
	_____ gpm	_____ hpd	_____ dpy	
	OR: _____ gpd	_____ dpy		
	_____ gpm	_____ hpd	_____ dpy	
	OR: _____ gpd	_____ dpy		
	_____ gpm	_____ hpd	_____ dpy	
	OR: _____ gpd	_____ dpy		
	_____ gpm	_____ hpd	_____ dpy	
	OR: _____ gpd	_____ dpy		
	_____ gpm	_____ hpd	_____ dpy	
	OR: _____ gpd	_____ dpy		
	_____ gpm	_____ hpd	_____ dpy	
	OR: _____ gpd	_____ dpy		

G CBI 3A-5.

For this system, use the wastewater treatment unit codes and design parameters provided in Question 3A-3. Under "Unit Code", list all wastewater treatment units that were part of the wastewater treatment system as it was configured to operate during **1997**. For each unit, indicate whether it is used on a batch or continuous basis, provide the unit's design capacity flow and design parameters, and provide on the table the year of installation. To the extent available, provide additional design parameters not listed on the table in Question 3A-3. **If you need additional space, photocopy this page before writing on it and number each copy of Question 3A-5 in the space provided in the upper right corner. Note: Question 3A-5 is one page long.**

Unit Code	Batch or Continuous	Design Capacity Flow	Design Parameter(s)	Year Installed
Example C1-1	G Batch	_____ gal/batch _____ batch/day	circular, 80' diameter, 12' depth, 900 gal/ft ² -day, 2 hr retention time	1991
	Continuous	_____ 60 _____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		

- G CBI 3A-6.** Provide actual operating and maintenance (O&M) costs paid and rates for this system during **1997**. If actual costs and rates are not available, provide best estimates. Include operating labor, maintenance, sampling/monitoring costs, chemical costs, energy costs, steam costs, and sludge and oil disposal fees. Also include rates of labor, energy, steam, and sludge and oil disposal fees.

O&M Category	Cost	Rate
Labor (operating and maintenance)	\$	\$ per hour (average rate of labor)
Maintenance (materials and vendors)	\$	
Sampling/Monitoring Costs	\$	
Chemical Costs	\$	
Energy Costs - Power	\$	
Energy Costs - Gas	\$	\$ per G mmcf G million btu
Energy Costs - Fuel Oil	\$	\$ per Ggallon Gbarrel
Energy costs - Other (<i>specify</i>):	\$	\$ per (<i>specify unit of measurement</i>):
Steam Costs	\$	\$ per pound
RCRA-Hazardous Sludge Disposal	\$	\$ per Ggallon Gton
Nonhazardous Sludge Disposal	\$	\$ per Ggallon Gton
Other Sludge Disposal, if other classifications apply to your area (<i>specify type</i>):	\$	\$ per Ggallon Gton
Oil Disposal	\$	\$ per Ggallon Gton
Other (<i>specify</i>):	\$	
Other (<i>specify</i>):	\$	
Other (<i>specify</i>):	\$	
Other (<i>specify</i>):	\$	

RCRA = Resource Conservation and Recovery Act
 kwh = kilowatt hour
 barrel = 42 gallons

mmcf = million cubic feet
 btu = British thermal unit

G CBI 3A-7.

Provide information on any recent modifications and/or shut downs which have occurred at this wastewater treatment system since 1993. Recent modifications may include the replacement, upgrade, or addition of one or more treatment units. Explain why treatment units have been replaced, upgraded, or added (e.g., compliance with water quality limits).

Shut Down or Modification?	Date	Description

G CBI 3A-8.

Provide information on any publicly announced modifications and/or shut downs planned to occur during the next five years (1998 to 2002) at this wastewater treatment system. Explain why treatment units will be replaced, upgraded, or added (e.g., compliance with water quality limits).

Shut Down or Modification?	Anticipated Date	Description

G CBI 3A-9.

Identify **ALL** chemical additions to this treatment system, completing one row for each chemical. Provide the chemical name (including vendor name and product code, if applicable), the purpose of the chemical, the consumption rate of the undiluted chemical, and the receiving treatment unit code from Question 3A-3. **If you need additional space, photocopy this page before writing on it and number each copy of Question 3A-9 in the space provided in the upper right corner. Note: Question 3A-9 is one page long.**

Chemical	Purpose	Consumption Rate	Receiving Treatment Unit Code(s)
<u>Example</u> Polymer (XYZ Company; product AB40)	improve settling	_____ gal/day _____ 50 _____ lbs/day	C1-1 C1-2
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	
		_____ gal/day _____ lbs/day	

G CBI 3A-10.

Identify **ALL** discharges from this treatment system, **including treated wastewater, sludge, and oil discharges** and provide the treatment unit code (from Question 3A-3) for the unit which releases this discharge. Provide actual or estimated flow or discharge rates for each discharge in gallons per minute (gpm), hours per day (hpd), days per year (dpy), pounds per day (lbs/day), or tons per day (tons/day). Provide the destination of each discharge (e.g., effluent discharged to river, dewatered sludge landfilled on site in a nonhazardous landfill, waste oil hauled off site for reclamation). **If you need additional space, photocopy this page before writing on it and number each copy of Question 3A-10 in the space provided in the upper right corner. Note: Question 3A-10 is one page long.**

Discharge and Treatment Unit Code	Flow or Discharge Rate	Destination
<u>Example</u> Final Effluent CT-1	<u>60</u> gpm <u>24</u> hpd <u>365</u> dpy OR: _____ gpd _____ dpy	Mill Creek via Outfall 002
Wastewater		
	_____ gpm _____ hpd _____ dpy OR: _____ gpd _____ dpy	
	_____ gpm _____ hpd _____ dpy OR: _____ gpd _____ dpy	
	_____ gpm _____ hpd _____ dpy OR: _____ gpd _____ dpy	
	_____ gpm _____ hpd _____ dpy OR: _____ gpd _____ dpy	
	_____ gpm _____ hpd _____ dpy OR: _____ gpd _____ dpy	
Oil Wastes		
	_____ gpd _____ dpy _____ % moisture	
	_____ gpd _____ dpy _____ % moisture	
Solid Waste - Wet Weight		
	_____ lbs/day or _____ tons/day _____ dpy _____ % solids	
	_____ lbs/day or _____ tons/day _____ dpy _____ % solids	

Question 3A-11 requires summary information for data collected by your site, including (1) any data collected simultaneously at both influent and effluent streams from a wastewater treatment system or a treatment unit, and (2) any other wastewater characterization data collected at nonpermitted monitoring locations.

This question requires you to assign a unique sampling point (SP) number to each sampling location, identify the location on the appropriate PFD with this SP number, and provide the SP number and the PFD number at the top of the table. At the top of the table, provide (1) the treatment unit codes (from Question 3A-5) from where the wastewater stream is an effluent (e.g., acid pickling line and recycle system) and to where the stream is an influent (e.g., C1-1), **OR** (2) the outfall to where the wastewater stream is discharged (e.g., Outfall 001 - Mill Creek). Check (✓) the appropriate choice and provide the source and/or destination of the stream.

This question contains a table to specify the following information:

- The pollutant analyzed (using the provided codes shown on the following page);
- The EPA analytical method used;
- Whether the samples were collected as grabs or as composites;
- The total number of samples collected at that sampling point for that pollutant;
- The number of samples in which the pollutant was not detected;
- The typical detection limit or range of detection limits for that sampling point for that pollutant;
- The average concentration of the pollutant;
- The calculation methodology used to determine the average concentration when some or all measurements were not detected (see the following detailed description);
- The maximum concentration of the pollutant;
- The minimum concentration of the pollutant; and
- The average flow rate at this sampling point during the sampling period for that pollutant.

At the top of the table, you are also required to provide the range of dates in which data were collected. Complete the table, one page per sampling point, one row per pollutant parameter.

Pollutant Parameter Codes

Pollutant Parameter Code	Pollutant Parameter Name	Pollutant Parameter Code	Pollutant Parameter Name
P-1	Aluminum, Total	P-20	Phenols (4AAP)
P-2	Ammonia - N	P-21	Temperature
P-3	Benzene	P-22	Tetrachloroethylene
P-4	Benzo(a)pyrene	P-23	Tin, Total
P-5	Biochemical Oxygen Demand (BOD)	P-24	Total Dissolved Solids (TDS)
P-6	Chemical Oxygen Demand (COD)	P-25	Total Petroleum Hydrocarbons (TPH), SGT-HEM ²
P-7	Chromium, Total	P-26	Total Recoverable Petroleum Hydrocarbons
P-8	Copper, Total	P-27	Total Residual Chlorine
P-9	Cyanide, Amenable	P-28	Total Suspended Solids (TSS)
P-10	Cyanide, Total	P-29	Zinc, Total
P-11	Hexavalent Chromium	P-30	Other (<i>specify</i>): _____
P-12	Iron, Total	P-31	Other (<i>specify</i>): _____
P-13	Lead, Total	P-32	Other (<i>specify</i>): _____
P-14	Mercury, Total	P-33	Other (<i>specify</i>): _____
P-15	Naphthalene	P-34	Other (<i>specify</i>): _____
P-16	Nickel, Total	P-35	Other (<i>specify</i>): _____
P-17	Oil and Grease, HEM ¹	P-36	Other (<i>specify</i>): _____
P-18	Oil and Grease, Total Recoverable	P-37	Other (<i>specify</i>): _____
P-19	pH	P-38	Other (<i>specify</i>): _____

¹N-Hexane Extractable Material (HEM)

²Silica Gel Treated N-Hexane Extractable Material (SGT-HEM)

Not Detected (ND) Calculation Method

To complete Question 3A-11, you are required to provide the calculation method you used to calculate the average concentration of each pollutant parameter when some or all measurements were not detected (ND). Since laboratories may report pollutant parameters as ND, EPA expects that you will also use the NDs in the calculation of the average concentration. There are several methods which may be used to calculate an average pollutant parameter concentration when ND values have been reported by the laboratory. EPA requires you to identify which method you used to calculate an average pollutant parameter concentration. The following is a description of the different types of detection limits, the ND calculation methods, and examples:

- The method detection limit is the detection limit set by the analytical methods in 40 CFR Part 136.
- The sample detection limit is the detection limit set by the matrix complexity and reported to you by the laboratory.

In calculating an average pollutant concentration, the following methods of including ND sample results are typically used:

- ND value set equal to the method detection limit;
- ND value set equal to one-half of the method detection limit;
- ND value set equal to the sample detection limit;
- ND value set equal to one-half of the sample detection limit; and
- ND value set equal to zero (0).

EXAMPLE: Suppose a site analyzes two samples for benzo(a)pyrene. Benzo(a)pyrene is detected in the first sample at 100 ppb, but is not detected in the second sample. The analytical laboratory reports the second result as <50 ppb, where the method detection limit is 10 ppb, and the sample detection limit is 50 ppb. Depending on which calculation method is used, the following averages could be calculated.

Result 1	Result 2	Method	Average
100 ppb	ND(50 ppb)	Used method detection limit (10 ppb)	55 ppb
100 ppb	ND(50 ppb)	Used one-half method detection limit (5 ppb)	52.5 ppb
100 ppb	ND(50 ppb)	Used sample detection limit (50 ppb)	75 ppb
100 ppb	ND(50 ppb)	Used one-half sample detection limit (25 ppb)	62.5 ppb
100 ppb	ND(50 ppb)	Used zero (0)	50 ppb

Use the following list of ND Calculation Method Codes to complete Question 3A-11.

ND Calculation Method Code	ND Calculation Method
ND-1	Used method detection limit
ND-2	Used one-half of the method detection limit
ND-3	Used sample detection limit
ND-4	Used one-half of the sample detection limit
ND-5	Used zero (0)
ND-6	Other (<i>specify</i>):

Submittal of Hard Copy and Electronic Data

If you have any of the data requested in Question 3A-11 readily available in the requested format (see the question), you may attach it to the survey in lieu of responding to the question; write your site ID (shown on the cover page of Part A) and the question number on the upper right corner of each attachment. If you have any of the data requested in Question 3A-11 readily available in an electronic format (e.g., spreadsheet), please include a disk with the hard copy output of the electronic file with your survey submittal. Indicate below whether you are submitting hard copies of the data requested in Question 3A-11.d. in lieu of filling out this part of the question. Also indicate whether you are including data in an electronic format in addition to the hard copies; specify the software and version.

Question	Hard Copy	Electronic
3A-11.d.	G	G

Software and version: _____

- G CBI 3A-11.a.** Has your site collected any data for any parameter from **NONPERMITTED MONITORING LOCATIONS** in this system by EPA-approved methods as described in 40 CFR Part 136 **during 1997?** **DO NOT INCLUDE DATA COLLECTED FOR THE PURPOSE OF PERMIT COMPLIANCE;** NPDES permit compliance data are requested in Section 4.
G Yes (continue)
G No (SKIP to Question 3A-12)
- G CBI b.** Indicate the type of data collected from nonpermitted monitoring locations in this system. Check (✓) **ALL** that apply.
G Data collected simultaneously at both influent and effluent streams from this system or any unit in this system.
G Wastewater characterization analytical data collected from separate nonpermitted monitoring location(s).
- G CBI c.** Has your site collected any data for any parameter from nonpermitted monitoring locations in this system by EPA-approved methods as described in 40 CFR Part 136 **during 1995 or 1996?**
G Yes
G No

3A-18

CBI 3A-12. List **ALL** metal, organic, dioxin/furan, PCB, and conventional (e.g., total suspended solids (TSS), oil and grease) pollutant parameters which this system is designed to treat. **If you need additional space, photocopy this page before writing on it and number each copy of Question 3A-12 in the space provided in the upper right corner. Note: Question 3A-12 is one page long.**

[illegible]

G CBI 3A-13.a. Indicate whether there are any available parcels of on-site land appropriate for the construction of additional wastewater treatment facilities.

G Yes (continue)

G No (SKIP to Question 3A-14)

G CBI b. For up to five parcels of land on site, provide a general description of the location of each parcel with respect to a manufacturing process or a wastewater treatment system, the size of each parcel, and the distance each parcel is from this wastewater treatment system.

Parcel of Land	General Description of the Location	Size of Parcel (acres)	Distance from this system (specify units)
1			
2			
3			
4			
5			

G CBI 3A-14.

For this system, list any operable wastewater treatment units which were located at this wastewater treatment system but were **NOT** part of the system as it was configured to operate during **1997**. For each unit, indicate whether it is used on a batch or continuous basis, provide the unit's design capacity flow and design parameters, and provide the year of installation. To the extent available, provide additional design parameters not listed on the table in Question 3A-3. **If you need additional space, photocopy this page before writing on it and number each copy of Question 3A-14 in the space provided in the upper right corner. Note: Question 3A-14 is one page long.**

Unit Code	Batch or Continuous	Design Capacity Flow	Design Parameter(s)	Year Installed
Example C1-1	G Batch	_____ gal/batch _____ batch/day	circular, 80' diameter, 12' depth, 900 gal/ft ² -day, 2 hr retention time	1991
	Continuous	_____ 60 _____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		
	G Batch	_____ gal/batch _____ batch/day		
	G Continuous	_____ gpm		

**COMMENTS FOR SECTION 3A: IN-PROCESS AND END-OF-PIPE
WASTEWATER TREATMENT SYSTEMS**

Cross reference your comments by question number and indicate the confidential status of your comment by checking (✓) the box in the column titled "CBI" (Confidential Business Information). If you need additional space, photocopy this page before writing on it and number each copy in the space provided in the upper right corner.

Question Number	CBI	Comment
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SECTION 3B. PLANT-WIDE POLLUTION PREVENTION PRACTICES (INCLUDING WASTE REDUCTION AND PROCESS RECYCLING)

TECHNICAL INFORMATION HELP LINE: (800) 357-7075

Throughout Section 2, you were prompted for process-specific management practices. In this section, describe practices which have not previously been identified as plant-wide environmental management and pollution prevention practices (waste reduction). Examples include but are not limited to:

- Cascading manufacturing process discharges;
- Collection and treatment of storm water;
- Substitution of less toxic chemicals for certain plant-wide applications (e.g., road dust suppression, floor or equipment cleaning);
- Segregation of process wastes to maximize reuse;
- Specialized employee training;
- Prompt attention to faulty equipment, leaks, and other problems;
- Preventive maintenance and equipment monitoring program to check for leaks and spills; and
- Policy and operational procedures instituted as a result of previous leaks and equipment failures resulting in environmental releases of wastes and by-products.

For each practice, try to include the following information:

- Affected manufacturing process(es) and wastewater streams;
- Targeted pollutants;
- Cost information (e.g., cost of installation or implementation, net change in operating costs as a result of the practice); and
- Measurable results (e.g., emissions reductions).

G CBI Describe plant-wide management or pollution prevention (waste reduction) practices which have not previously been identified in Section 2. **If you need additional space, photocopy this page before writing on it and number each copy in the space provided in the upper right corner.** If you have previously prepared descriptions or reports of management or pollution prevention activities, attach these to the survey, write your site ID (shown on the cover page of Part A) and "Section 3B" on the upper right corner of each attachment, and reference them here.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

SECTION 4

WASTEWATER OUTFALL INFORMATION

GENERAL INSTRUCTIONS

This section of the survey has been designed to collect information specific to the discharge of waters at your site. You are required to complete those subsections which apply to this site. The subsections are:

- 4A General Discharge Information
- 4B Permit Information and Discharges At Permit Monitoring Locations

Carefully read the instructions at the beginning of each subsection. **Some QUESTIONS may need to be copied before responding if your site has multiple permit monitoring locations which discharge process wastewater. For copied pages, number the copies using the space provided in the upper right corner of the page.**

In order to understand the overall process, EPA is requiring in Question 4A-2 that you provide a simplified process flow diagram (PFD) depicting each or all permit monitoring and discharge locations on site. You are **NOT** required to create a new PFD if an existing diagram will suffice. Because you are asked to attach several PFDs to the survey, number each PFD in the upper right corner, starting with "PFD-1", and numbering each sequentially. If you have already started numbering PFDs, use the next number in the sequence. Make sure your site ID number (shown on the cover page of Part A) is on each diagram.

Refer to the Definitions Section for terms which are used in this survey.

If a particular part of the required information is not applicable to your site, indicate by "NA" rather than leaving the answer blank. Enter zero where appropriate. Do not leave an entry blank if the answer is zero.

You are required to provide best engineering estimates when data are not readily available. If you provide an estimate, note the methods that were used to make the estimates on the Comments page located at the end of the section.

If you have any comments on a question or you feel an answer needs clarification, use the Comments page located at the end of each subsection. Be sure to cross-reference your comments by question number.

If you have any questions regarding the completion of this section of the survey, contact the Technical Information Help Line at (800) 357-7075 for assistance, or email your questions to steel_helpline@erg.com.

Indicate information which should be treated as confidential by checking the Confidential Business Information (CBI) box next to each question number for which responses contain CBI. Any response where "CBI" is not checked will be considered nonconfidential. Refer to the instructions given in the PROVISIONS REGARDING DATA CONFIDENTIALITY section on page ii for additional information regarding EPA's confidentiality procedures set forth in 40 CFR Part 2, Subpart B.

SECTION 4A. GENERAL DISCHARGE INFORMATION

TECHNICAL INFORMATION HELP LINE: (800) 357-7075

G CBI 4A-1. How many discharge locations (outfalls) and other permit monitoring locations are present at this site? Include discharge locations discharging to surface waters, publicly owned treatment works (POTWs), privately owned treatment works (PrOTWs), and internal permit monitoring locations. _____

For each discharge location (outfall) and permit monitoring location, complete one row of this table, and provide the site designation of the outfall or internal permit monitoring location, the type(s) of wastewater discharged, and the discharge destination (e.g., river, POTW, or other monitoring location designation). **If you need additional space, photocopy this page before writing on it.**

Outfall or Internal Permit Monitoring Location Designation	Type(s) of Wastewater	Discharge Destination
	<input type="checkbox"/> Process wastewater <input type="checkbox"/> Ground water <input type="checkbox"/> Landfill leachate <input type="checkbox"/> Noncontact cooling water <input type="checkbox"/> Sanitary wastewater <input type="checkbox"/> Other: <input type="checkbox"/> Storm water associated with industrial activity <input type="checkbox"/> Storm water not associated with industrial activity	
	<input type="checkbox"/> Process wastewater <input type="checkbox"/> Ground water <input type="checkbox"/> Landfill leachate <input type="checkbox"/> Noncontact cooling water <input type="checkbox"/> Sanitary wastewater <input type="checkbox"/> Other: <input type="checkbox"/> Storm water associated with industrial activity <input type="checkbox"/> Storm water not associated with industrial activity	
	<input type="checkbox"/> Process wastewater <input type="checkbox"/> Ground water <input type="checkbox"/> Landfill leachate <input type="checkbox"/> Noncontact cooling water <input type="checkbox"/> Sanitary wastewater <input type="checkbox"/> Other: <input type="checkbox"/> Storm water associated with industrial activity <input type="checkbox"/> Storm water not associated with industrial activity	
	<input type="checkbox"/> Process wastewater <input type="checkbox"/> Ground water <input type="checkbox"/> Landfill leachate <input type="checkbox"/> Noncontact cooling water <input type="checkbox"/> Sanitary wastewater <input type="checkbox"/> Other: <input type="checkbox"/> Storm water associated with industrial activity <input type="checkbox"/> Storm water not associated with industrial activity	
	<input type="checkbox"/> Process wastewater <input type="checkbox"/> Ground water <input type="checkbox"/> Landfill leachate <input type="checkbox"/> Noncontact cooling water <input type="checkbox"/> Sanitary wastewater <input type="checkbox"/> Other: <input type="checkbox"/> Storm water associated with industrial activity <input type="checkbox"/> Storm water not associated with industrial activity	
	<input type="checkbox"/> Process wastewater <input type="checkbox"/> Ground water <input type="checkbox"/> Landfill leachate <input type="checkbox"/> Noncontact cooling water <input type="checkbox"/> Sanitary wastewater <input type="checkbox"/> Other: <input type="checkbox"/> Storm water associated with industrial activity <input type="checkbox"/> Storm water not associated with industrial activity	

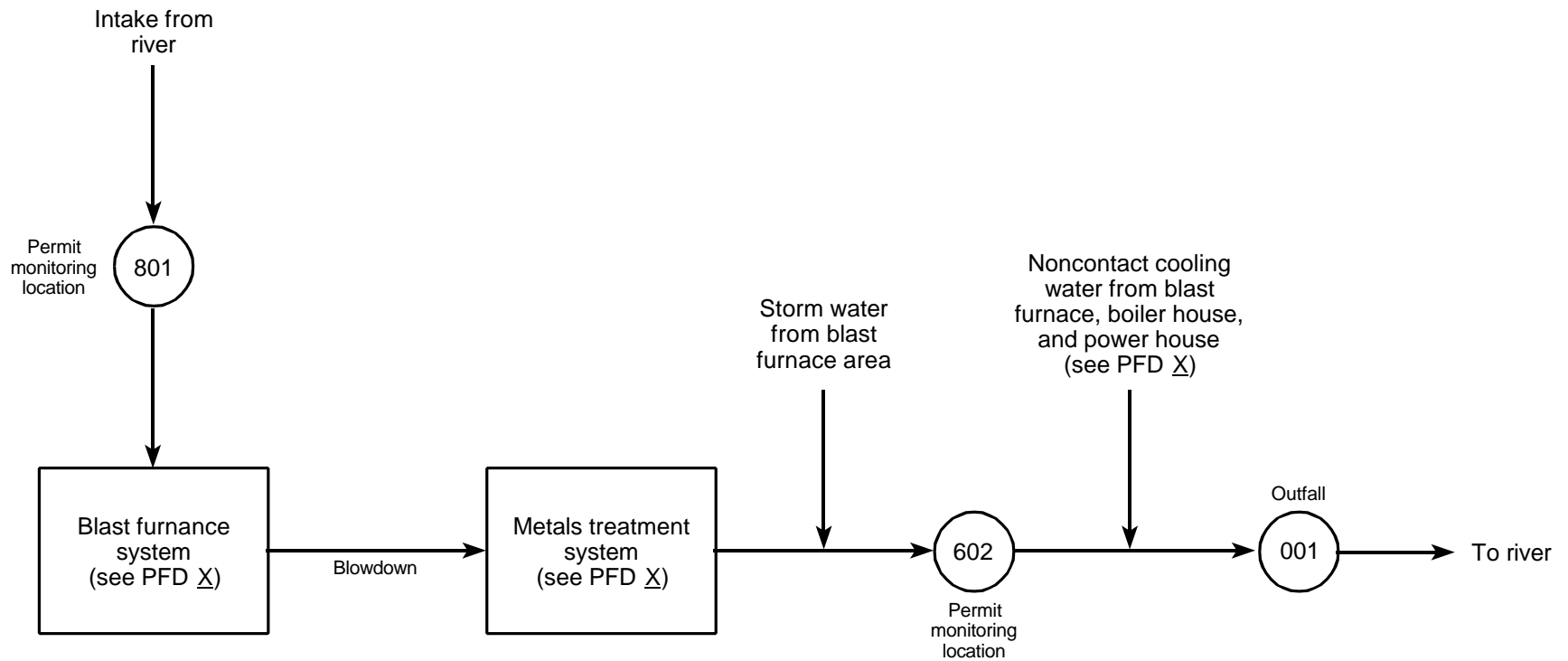
G CBI 4A-2. Attach a simplified process flow diagram(s) (PFD) that shows all permit monitoring locations and outfalls. You are **NOT** required to create a new PFD if an existing diagram will suffice. Number the diagram in the upper right corner, and include your site ID number (as shown on the cover page of Part A). Specific instructions for including the PFD(s), along with an example diagram, are provided below. **Flow rates are NOT required on the diagrams.**

Provide the PFD number(s) assigned to the diagram(s) showing all permit monitoring locations and outfalls. **If the permit monitoring locations and outfalls are already shown on a PFD provided elsewhere in this survey, provide the PFD number(s) and review the following list for completeness.** If you need assistance, call the Technical Information Help Line at (800) 357-7075.

Outfall or Permit Monitoring Location PFD-_____

Process Flow Diagram Checklist

Be sure...	✓
Each permit monitoring location or outfall is labeled with the outfall designation.	G
All sources to the location or outfall, including noncontact cooling water, storm water, and ground water, are labeled.	G
All discharge destinations (e.g., to POTW, river, or other monitoring locations) are labeled.	G
For outfalls that discharge only storm water not associated with industrial activity, a single representative diagram can be provided (list all represented outfall numbers on the diagram).	G
The PFD number and your site ID number are written on the diagram(s).	G
If you believe that the diagram should be treated as confidential, stamp it "Confidential" or write "Confidential" or "CBI" across the top. If any diagram is not marked "Confidential", it will be considered nonconfidential under 40 CFR Part 2, Subpart B.	G



Example Outfall Diagram

COMMENTS FOR SECTION 4A: GENERAL DISCHARGE INFORMATION

Cross reference your comments by question number and indicate the confidential status of your comment by checking (✓) the box in the column titled "CBI" (Confidential Business Information). If you need additional space, photocopy this page before writing on it and number each copy in the space provided in the upper right corner.

Question Number	CBI	Comment
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SECTION 4B. PERMIT INFORMATION AND DISCHARGES AT PERMIT MONITORING LOCATIONS

TECHNICAL INFORMATION HELP LINE: (800) 357-7075

4B-1.a. Does your site discharge process wastewater by pipeline, sewer, or other conveyance to surface water?

G Yes

G No

b. Does your site have a National Pollutant Discharge Elimination System (NPDES) permit or a state-issued water discharge permit which authorizes and/or regulates the discharge of process or nonprocess wastewaters?

G Yes (continue)

G No (SKIP to Question 4B-2)

c. Indicate (✓) **ALL** type(s) of waters regulated by this permit.

G Process wastewater

G Noncontact cooling water associated with manufacturing operations

G Noncontact cooling water associated with power or steam generation

G Storm water collected from areas associated with industrial activity

G Storm water collected from areas not associated with industrial activity

G Sanitary wastewater

G Other (specify): _____

G Other (specify): _____

G Other (specify): _____

You may opt to attach a copy of your site's permit to the survey in lieu of answering a number of the permit-related questions in this section. This includes Question 4B-1.d. below. If you decide to attach a copy of your site's permit, include your site ID number (as shown on the cover page of Part A) in the upper right corner, check (✓) the box to the right, and SKIP to Question 4B-2. If you do not decide to attach a copy of your site's permit to the survey, continue to Question 4B-1.d. **G**

d. For the permit, provide the name and type (e.g., lake, river) of receiving water, the Federal NPDES permit number and/or the state issued water discharge permit number, and the expiration date(s) of the permit(s).

Name and type of receiving water

Federal NPDES Permit Number

Expiration Date

State Issued Water Discharge Permit Number

Expiration Date

- 4B-2.a.** Does your site have a connection by pipeline, sewer, or other conveyance to a publicly owned treatment works (POTW)?
G Yes (continue)
G No (SKIP to Question 4B-3)
- b. Does your site discharge **process wastewater** by pipeline, sewer, or other conveyance to a POTW?
G Yes
G No
- c. Does your site have a POTW-written permit or agreement which includes the discharge of process or nonprocess wastewater?
G Yes (continue)
G No (SKIP to Question 4B-2.e)
- d. Indicate (✓) **ALL** type(s) of waters regulated by this permit.
G Process wastewater
G Noncontact cooling water associated with manufacturing operations
G Noncontact cooling water associated with power or steam generation
G Storm water collected from areas associated with industrial activity
G Storm water collected from areas not associated with industrial activity
G Sanitary wastewater
G Other (specify): _____
G Other (specify): _____
G Other (specify): _____

You may opt to attach a copy of your site's permit or agreement to the survey in lieu of answering a number of the permit-related questions in this section. This includes Question 4B-2.e. below. If you decide to attach a copy of your site's permit or agreement, include your site ID number (as shown on the cover page of Part A) in the upper right corner, check (✓) the box to the right, and SKIP to Question 4B-3. If you do not decide to attach a copy of your site's permit or agreement to the survey, continue to Question 4B-2.e. **G**

- e. Provide the name, address, telephone number, and the name of your contact at the POTW. Provide the permit number provided by the POTW and the expiration date (if applicable), and, if known, the NPDES permit number of the permit issued to the POTW.

POTW Name	Name of POTW Contact
Street Address	() Telephone Number
Street Address continued	Site Discharge Permit Number (if applicable)
City	Expiration Date (if applicable)
State Zip Code	NPDES Permit Number of the POTW (if known)

- 4B-3.a.** Does your site have a connection by pipeline, sewer, or other conveyance to a privately owned treatment works (PrOTW)?
G Yes (continue)
G No (SKIP to Question 4B-4)
- b. Does your site discharge **process wastewater** by pipeline, sewer, or other conveyance to a PrOTW?
G Yes
G No
- c. Does your site have a PrOTW-written permit or agreement which includes the discharge of process or nonprocess wastewater?
G Yes (continue)
G No (SKIP to Question 4B-3.e)
- d. Indicate (✓) **ALL** type(s) of waters regulated by this permit.
G Process wastewater
G Noncontact cooling water associated with manufacturing operations
G Noncontact cooling water associated with power or steam generation
G Storm water collected from areas associated with industrial activity
G Storm water collected from areas not associated with industrial activity
G Sanitary wastewater
G Other (specify): _____
G Other (specify): _____
G Other (specify): _____

You may opt to attach a copy of your site's permit or agreement to the survey in lieu of answering a number of the permit-related questions in this section. This includes Question 4B-3.e. below. If you decide to attach a copy of your site's permit or agreement, include your site ID number (as shown on the cover page of Part A) in the upper right corner, check (✓) the box to the right, and SKIP to Question 4B-4. If you do not decide to attach a copy of your site's permit or agreement to the survey, continue to Question 4B-3.e. **G**

- e. Provide the name, address, telephone number, and the name of your contact at the PrOTW. If applicable, provide the permit number and expiration date of the permit issued to your site by the PrOTW. If known, provide the NPDES permit number of the permit issued to the PrOTW.

_____ PrOTW Name		_____ Name of PrOTW Contact
_____ Street Address		() _____ Telephone Number
_____ Street Address continued		_____ Site Discharge Permit Number (if applicable)
_____ City		_____ Expiration Date (if applicable)
_____ State	_____ Zip Code	_____ NPDES Permit Number of the PrOTW (if known)

-
- 4B-4.a.** Was your site regulated under one or more current federal categorical effluent limitations guidelines during **1997**? Federal categorical effluent limitations guidelines are developed by the U.S. Environmental Protection Agency to be used by regional, state, and local permitting authorities as a basis for writing permits for specific industries (see 40 CFR Chapter I, Subchapter N).
- ☐ Yes (continue)
- ☐ No (SKIP to Question 4B-5)
- b. Indicate which federal categorical effluent limitations guidelines regulate your site. Check (✓) **ALL** that apply.
- ☐ Iron and Steel, 40 CFR Part 420
- ☐ Metal Finishing, 40 CFR Part 433
- ☐ Electroplating, 40 CFR Part 413
- ☐ Ferroalloy, 40 CFR Part 424
- ☐ Metal Molding and Casting, 40 CFR Part 464
- ☐ Coil Coating, 40 CFR Part 465
- ☐ Other (*specify*): _____
-
- 4B-5.a.** Does the current NPDES permit for the site contain alternative effluent limitations pursuant to 40 CFR 420.03 ("The Water Bubble") as defined in the next paragraph?
- Alternate Effluent Limitations to Those Representing the Degree of Effluent Reduction Attainable by the Application of Best Practicable Control Technology Currently Available, Best Available Technology, and Best Conventional Technology, 40 CFR Section 420.03.** Section 420.03 (commonly known as the "water bubble" rule) provides a mechanism whereby dischargers with multiple outfalls may discharge greater quantities of pollutants from outfalls where treatment costs may be high in exchange for a larger decrease in discharges from outfalls at the same plant where treatment costs may be less. The regulation stipulates that only intraplant trades and no interplant trades are allowed; that only like pollutants can be traded (e.g., zinc for zinc, not zinc for lead or ammonia-N); that minimum net reductions of 10% for toxic and nonconventional pollutants and 15% for conventional pollutants must be achieved; and, that trades within certain subcategories (i.e., cokemaking and cold forming) are restricted.
- ☐ Yes (SKIP to Question 4B-6)
- ☐ No (continue)
- ☐ Facility does not hold an NPDES permit (SKIP to Question 4B-8)
- b. Indicate the reason(s) why the Water Bubble provision was not used for development of the site discharge permit. Check (✓) **ALL** that apply.
- ☐ Site does not have more than one permit monitoring point for the discharge of process wastewater (SKIP to Question 4B-6)
- ☐ Restrictions on effluent from cokemaking and cold rolling operations eliminate permit monitoring points from consideration
- ☐ Site is regulated under New Source Performance Standards
- ☐ Water Bubble provisions are too complex to apply
- ☐ Use of Water Bubble is not economically advantageous due to 10 or 15 percent net reduction requirement
- ☐ No cost savings would be achieved
- ☐ Permit has water quality-based effluent limitations
- ☐ Site personnel were unaware of the Water Bubble provisions
- ☐ Other (*specify*): _____
-

4B-5.c. (cont.) Would the Water Bubble be of interest to this site if EPA were able to expand it to include cokemaking operations?

G Yes

G No

G Not applicable

d. Would the Water Bubble be of interest to this site if EPA were able to expand it to include cold forming operations?

G Yes

G No

G Not applicable

4B-6. Has your plant obtained a variance and/or modified effluent limitations for nonconventional pollutants pursuant to Section 301(g) of the Clean Water Act, as described in the next paragraph?

Modifications for Certain Nonconventional Pollutants, CWA Section 301(g). The Administrator, with the concurrence of the State, may modify the requirements of Section 301(b)(2)(A) with respect to the discharge from any point source of ammonia, chlorine, color, iron, and total phenols (4AAP) (when determined by the Administrator to be a pollutant covered by Section 301(b)(2)(F)) and any other pollutant which the Administrator lists under 301(g)(4).

G Yes (continue)

G No (SKIP to Question 4B-7)

G Unknown (SKIP to Question 4B-7)

Which pollutants? _____

Which outfalls? _____

4B-7. Does the current NPDES permit (for the discharge of process wastewaters) for this site contain iron and steel effluent limitations (40 CFR Part 420) based on a fundamentally different factors variance pursuant to Section 301(n) of the Clean Water Act?

Fundamentally Different Factors Variance, CWA Section 301(n). The Administrator, with the concurrence of the State, may establish an alternative requirement under Section 301(b)(2) or Section 307(b) for a facility that modifies the requirements of national effluent limitation guidelines or categorical pretreatment standards that would otherwise be applicable to such a facility, if the owner or operator of such a facility demonstrates to the satisfaction of the Administrator that the facility is fundamentally different with respect to the factors (other than cost) specified in Section 304(b) or 304(g) and considered by the Administrator in establishing such national effluent limitation guidelines or categorical pretreatment standards.

G Yes (continue)

G No (SKIP to Question 4B-8)

G Unknown (SKIP to Question 4B-8)

Which pollutants? _____

Which outfalls? _____



HOW MANY PERMIT MONITORING LOCATIONS CONTAINING PROCESS WASTEWATER OR STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY WERE ON SITE DURING 1997? _____

COMPLETE A COPY OF QUESTION 4B-8 FOR **EACH** PERMIT MONITORING LOCATION DISCHARGING PROCESS WASTEWATER OR STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY. IF DATA FOR 1997 ARE NOT REPRESENTATIVE OF NORMAL OPERATIONS DUE TO REASONS SUCH AS EXTENDED PRODUCTION OUTAGES, SUBSTITUTE THE MOST RECENT CALENDAR YEAR WHEN SUCH CIRCUMSTANCES DID NOT EXIST, NOTE THE YEAR OF OPERATION AND CIRCUMSTANCES IN THE COMMENTS AT THE END OF THIS SECTION, AND PROVIDE DATA FROM THAT CALENDAR YEAR. NUMBER EACH COPY OF QUESTION 4B-8 IN THE SPACE PROVIDED AT THE TOP OF EACH PAGE. NOTE: QUESTION 4B-8 IS 7 PAGES LONG.

- G CBI 4B-8.a.** What is the site designation for this permit monitoring location (e.g., Outfall 001)?

- G CBI b.** Indicate whether this permit monitoring location is an internal monitoring location or a final outfall.
G Internal monitoring location
G Final outfall
- G CBI c.** To where does this permit monitoring location discharge?
G Surface water
 Name of water body (*specify*): _____
G Publicly owned treatment works
 Name of POTW (*specify*): _____
G Privately owned treatment works
 Name of PrOTW (*specify*): _____
G Outfall (*specify*): _____
- G CBI d.** Provide the sources (e.g., treatment systems, storm water collection areas) contributing to this flow. Provide an average flow estimate of each individual source. Use designations specified elsewhere in the survey.

Source	Average Flow	
	Million Gallons Per Day (mgd)	Days Per Year (dpy)

G CBI 4B-8.e.
(cont.)

If you indicated in Question 4B-1, 4B-2, or 4B-3 that you were attaching a copy of your site's NPDES and/or state issued permit, POTW permit, or PrOTW agreement to the survey, you need only fill in the first column and the last two columns in the table below. In this case, provide in the first column the list of parameters which have limits which are not based on the effluent limitations guidelines in 40 CFR Part 420 for this permit monitoring location. Indicate whether each limit is water quality-based or local by checking the appropriate boxes in the last two columns of the table below. Note that this information is not usually contained in the permit.

If your permit has an accompanying fact sheet, however, which does contain this information, you may attach a copy of the fact sheet along with your permit in lieu of providing the information below. If you decide to attach a copy of the fact sheet, include your site ID number (as shown on the cover page of Part A) in the upper right corner, check (✓) the box to the right, and SKIP to Question 4B-8.f. **G**

If you did not attach a copy of your site's permit to the survey for this permit monitoring location, provide the list of parameters, including temperature, which are regulated by your NPDES and/or state issued permit, POTW permit, or ProTW agreement. For each regulated parameter, provide the monthly average and daily maximum limits; indicate whether the pollutant has a monitor-only requirement (write NA for monthly average and daily maximum); indicate whether the limits are water quality-based (if directly discharged); and indicate whether the limits are local limits (if discharged to a POTW or ProTW). Specify the units of measurements for the permit limits.

[illegible]

Question 4B-8.f requires summary information for monitoring data collected by your site for permit monitoring requirements at this permit monitoring location.

For this question, you are required to assign a unique sampling point (SP) number to each sampling location, identify the location on the appropriate PFD with this SP number, and provide the SP number and the PFD number at the top of the table. At the top of the table, also provide (1) the treatment unit codes (from Question 3A-3) from where the wastewater stream is an effluent (e.g., blast furnace clarifier C1-1) and to where the stream is an influent (e.g., Terminal Treatment equalization EQ-1), **OR** (2) the outfall to where the wastewater stream is discharged (e.g., Outfall 001 - Mill Creek). Check (✓) the appropriate choice and provide the source and/or destination of the stream.

Question 4B-8.f. contains a table to specify the following information:

- The pollutant analyzed (using the provided codes shown on the following page);
- The EPA analytical method used;
- Whether the samples were collected as grabs or as composites;
- The total number of samples collected at that sampling point for that pollutant;
- The number of samples in which the pollutant was not detected;
- The typical detection limit or range of detection limits for that sampling point for that pollutant;
- The average concentration of the pollutant;
- The calculation methodology used to determine the average concentration when some or all measurements were not detected (see the following detailed description);
- The maximum concentration of the pollutant;
- The minimum concentration of the pollutant; and
- The average flow rate at this sampling point during the sampling period for that pollutant.

Complete the table for this permit monitoring location, one row per pollutant parameter. If you have provided these data elsewhere in the survey, do **NOT** repeat it in this question. Indicate that the data is provided elsewhere on the Comments Page for this section.

Pollutant Parameter Codes

Pollutant Parameter Code	Pollutant Parameter Name	Pollutant Parameter Code	Pollutant Parameter Name
P-1	Aluminum, Total	P-20	Phenols (4AAP)
P-2	Ammonia - N	P-21	Temperature
P-3	Benzene	P-22	Tetrachloroethylene
P-4	Benzo(a)pyrene	P-23	Tin, Total
P-5	Biochemical Oxygen Demand (BOD)	P-24	Total Dissolved Solids (TDS)
P-6	Chemical Oxygen Demand (COD)	P-25	Total Petroleum Hydrocarbons (TPH), SGT-HEM ²
P-7	Chromium, Total	P-26	Total Recoverable Petroleum Hydrocarbons
P-8	Copper, Total	P-27	Total Residual Chlorine
P-9	Cyanide, Amenable	P-28	Total Suspended Solids (TSS)
P-10	Cyanide, Total	P-29	Zinc, Total
P-11	Hexavalent Chromium	P-30	Other (specify): _____
P-12	Iron, Total	P-31	Other (specify): _____
P-13	Lead, Total	P-32	Other (specify): _____
P-14	Mercury, Total	P-33	Other (specify): _____
P-15	Naphthalene	P-34	Other (specify): _____
P-16	Nickel, Total	P-35	Other (specify): _____
P-17	Oil and Grease, HEM ¹	P-36	Other (specify): _____
P-18	Oil and Grease, Total Recoverable	P-37	Other (specify): _____
P-19	pH	P-38	Other (specify): _____

¹N-Hexane Extractable Material (HEM)

²Silica Gel Treated N-Hexane Extractable Material (SGT-HEM)

Not Detected (ND) Calculation Method

To complete Question 4B-8.f., you are required to provide the calculation method you used to calculate the average concentration of each pollutant parameter when some or all measurements were not detected (ND). Since laboratories may report pollutant parameters as ND, EPA expects that you will also use the NDs in the calculation of the average concentration. There are several methods which may be used to calculate an average pollutant parameter concentration when ND values have been reported by the laboratory. EPA requires you to identify which method you used to calculate an average pollutant parameter concentration. The following is a description of the different types of detection limits, the ND calculation methods, and examples:

- The method detection limit is the detection limit set by the analytical methods in 40 CFR Part 136.
- The sample detection limit is the detection limit set by the matrix complexity and reported to you by the laboratory.

In calculating an average pollutant concentration, the following methods of including ND sample results are typically used:

- ND value set equal to the method detection limit;
- ND value set equal to one-half of the method detection limit;
- ND value set equal to the sample detection limit;
- ND value set equal to one-half of the sample detection limit; and
- ND value set equal to zero (0).

EXAMPLE: Suppose a site analyzes two samples for benzo(a)pyrene. Benzo(a)pyrene is detected in the first sample at 100 ppb, but is not detected in the second sample. The analytical laboratory reports the second result as <50 ppb, where the method detection limit is 10 ppb, and the sample detection limit is 50 ppb. Depending on which calculation method is used, the following averages could be calculated.

Result 1	Result 2	Method	Average
100 ppb	ND(50 ppb)	Used method detection limit (10 ppb)	55 ppb
100 ppb	ND(50 ppb)	Used one-half method detection limit (5 ppb)	52.5 ppb
100 ppb	ND(50 ppb)	Used sample detection limit (50 ppb)	75 ppb
100 ppb	ND(50 ppb)	Used one-half sample detection limit (25 ppb)	62.5 ppb
100 ppb	ND(50 ppb)	Used zero (0)	50 ppb

Use the following list of ND Calculation Method Codes to complete Question 4B-8.f.

ND Calculation Method Code	ND Calculation Method
ND-1	Used method detection limit
ND-2	Used one-half of the method detection limit
ND-3	Used sample detection limit
ND-4	Used one-half of the sample detection limit
ND-5	Used zero (0)
ND-6	Other (<i>specify</i>):

Submittal of Hard Copy and Electronic Data

If you have any of the data requested in Question 4B-8.f. readily available in the requested format (see the question), you may attach it to the survey in lieu of responding; write your site ID (shown on the cover page of Part A) and the question number on the upper right corner of each attachment. If you have any of the data requested in Question 4B-8.f. readily available in an electronic format (e.g., spreadsheet), please include a disk with the hard copy output of the electronic file with your survey submittal. Indicate below whether you are submitting hard copies of the data requested in Question 4B-8.f. in lieu of filling out these questions. Also indicate whether you are including data in an electronic format in addition to the hard copies; specify the software and version.

Question	Hard Copy	Electronic
4B-8.f.	G	G

Software and version: _____

4B-12

[illegible]

**COMMENTS FOR SECTION 4B:
PERMIT INFORMATION AND DISCHARGES AT
PERMIT MONITORING LOCATIONS**

Cross reference your comments by question number and indicate the confidential status of your comment by checking (✓) the box in the column titled "CBI" (Confidential Business Information). If you need additional space, photocopy this page before writing on it and number each copy in the space provided in the upper right corner.

Question Number	CBI	Comment
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